



Florida Agricultural Statistics Service
1222 Woodward Street
Orlando, Florida 32803
407 / 648-6013

<http://www.nass.usda.gov/fl>

AQUACULTURE

FLORIDA AGRICULTURE



June 2002

FLORIDA AQUACULTURE SALES EXCEED \$99 MILLION IN 2001

Florida producers of aquaculture products reported sales in 2001 of \$99.5 million dollars in a survey conducted by the Florida Department of Agriculture and Consumer Services. This is 16 percent higher than the \$86 million reported in 1999 and is the second highest sales year since the survey was first conducted in 1988, when sales for 1987 were \$35 million. Sales of aquaculture products reached a high of \$102 million in 1997. The increase in sales in 2001 from the previous survey reflects significant increases in sales of **aquatic plants**, **other fish** (mainly **hybrid striped bass**), and **shrimp**; moderate increases were reported in sales of **catfish**, **tilapia**, and **live rock**.

Sales figures in this report represent farm gate sales of aquatics produced by Florida growers and exclude harvest from open waters or the wild. Sales also exclude the value of imports and purchases from other Florida producers for immediate resale.

There were 684 active operations in 2001 (531 of which reported sales), using 7,014 acres of land and water surface. Of the 153 producers without sales in 2001, 68 had just begun operating and/or expect to have sales in 2002. The other 85 operations may or may not have sales for 2002. The survey revealed 20 potential new producers for 2002.

The leading segment of the aquaculture industry in Florida (in sales volume) continues to be **tropical fish**, which accounted for almost 43 percent of total sales. **Aquatic plants** now rank second, accounting for 21 percent of total aquaculture sales, exceeding sales of **clams**, which accounted for 18 percent of total sales.

Of the 684 operations, 319 (47 percent) used less than three acres of land and/or water. Over one half of these are clam producing operations, which operate on small amounts of leased acreage. Another 150 (22 percent) used three to five acres. There were only 25 operations using over 50 acres of land and/or water.

AQUACULTURE - Size of Operation Florida, 2001

| Acres in Operation | Number of Operations | Percent of Total |
|--------------------|----------------------|------------------|
| less than 3 | 319 | 46 |
| 3 to 5 | 150 | 22 |
| 6 to 19 | 130 | 19 |
| 20 to 49 | 60 | 9 |
| 50 to 99 | 19 | 3 |
| 100 or more | 6 | 1 |
| Total | 684 | 100 |

AQUACULTURE - Value of Sales - Florida, 2001

| | Producers | | Net Sales | % of Total |
|------------------------------|-----------|------------|--------------|------------|
| | Total | With Sales | | |
| Tropical Fish | 170 | 160 | \$42,424,000 | 42.6 |
| Aquatic Plants | 39 | 38 | \$21,320,000 | 21.4 |
| Clams ^{1/} | 336 | 231 | \$18,263,500 | 18.4 |
| Shrimp | 13 | 8 | \$7,404,000 | 7.5 |
| Alligators | 21 | 14 | \$3,253,000 | 3.3 |
| Other Fish ^{2/} | 28 | 18 | \$3,197,000 | 3.2 |
| Catfish | 48 | 36 | \$1,300,000 | 1.3 |
| Tilapia | 35 | 24 | \$979,000 | 1.0 |
| Other Aquatics ^{3/} | 23 | 19 | \$799,000 | 0.8 |
| Live Rock | 7 | 7 | \$577,000 | 0.6 |

^{1/} Includes clam seed

^{2/} Hybrid Striped Bass, Koi, Largemouth Bass, Bream, and Carp

^{3/} Crawfish, Eels, Snails, Turtles, Crabs, Frogs, and Oysters

The Florida aquaculture industry is characterized by many small businesses, in which the owner/operator and family members or partners provide much of the **labor**. Labor data was reported by 651 operations. Clam farmers reported working an average of 26.7 hours per week; tropical fish operators worked an average of 47.7 hours. Over all, operators worked an average of 30.3 hours per week. A total of 476 persons worked without pay on 305 of the operations. There were 383 operations (or 55%) reporting no paid workers during 2001. The 301 operations with paid workers employed 1,036 full time and 520 part time workers.

AQUACULTURE - Labor -Florida, 2001

| | Farms | Workers |
|------------------|-------|---------|
| Unpaid | 305 | 476 |
| Paid - full time | 156 | 1,036 |
| Paid - part time | 222 | 520 |

FLORIDA AQUACULTURE - Number of Producers, Area in Production, Sales - 2001

| | Producers | | Area in Production ^{1/} | | | | | | Net Value of Sales |
|------------------------------|-----------|---------------|----------------------------------|-------|-------------|----------|---------|-------|-----------------------|
| | Total | With Sales | Acres | | Square Feet | | Gallons | | |
| | | | 2001 | 2002 | 2001 | 2002 | 2001 | 2002 | |
| | | | (000) | | | | (000) | | |
| Tropical Fish | 170 | 160 | -- | -- | 58,700.1 | 57,114.6 | -- | -- | \$42,424,200 |
| Egg Layers | 135 | 131 | -- | -- | 37,013.1 | 36,317.0 | -- | -- | \$29,255,200 |
| Live Bearers | 83 | 81 | -- | -- | 21,699.0 | 20,809.6 | -- | -- | \$13,169,000 |
| Aquatic Plants | 39 | 38 | 693 | 613 | 527.5 | 527.5 | -- | -- | \$21,319,700 |
| Water Garden | 25 | 24 | 583 | 503 | 430.3 | 430.3 | -- | -- | ^{2/} |
| Aquarium | 9 | 8 | 37 | 37 | 68.4 | 68.4 | -- | -- | ^{2/} |
| Wetlands | 18 | 18 | 73 | 73 | 28.8 | 28.8 | -- | -- | \$2,170,600 |
| Clams | 336 | 231 | 1,261 | 1,259 | -- | -- | -- | -- | \$18,263,500 |
| Hard Clams | 304 | 214 | 943 | 940 | -- | -- | -- | -- | \$15,012,000 |
| Seed Clams | 33 | 30 | 312 | 312 | -- | -- | -- | -- | \$3,251,500 |
| Shrimp | 13 | 8 | 36 | 170 | -- | -- | 1,940 | 1,940 | \$7,404,500 |
| Alligators | 21 | 14 | 191 | 183 | 219.5 | 219.5 | -- | -- | \$3,252,700 |
| Hides | 21 | 13 | -- | -- | -- | -- | -- | -- | \$2,073,300 |
| Meat | 21 | 12 | -- | -- | -- | -- | -- | -- | \$1,179,400 |
| Other Fish ^{3/} | 28 | 18 | 212 | 277 | 136.1 | 136.1 | 904 | 1,214 | \$3,197,400 |
| Catfish | 48 | 36 | 920 | 927 | -- | -- | -- | -- | \$1,300,000 |
| Food | 43 | 31 | 850 | 857 | -- | -- | -- | -- | \$1,056,200 |
| Other | 6 | 5 | 70 | 70 | -- | -- | -- | -- | \$243,700 |
| Tilapia | 35 | 24 | 103 | 103 | 147.2 | 148.2 | 3,442 | 3,503 | \$978,700 |
| Other Aquatics ^{4/} | 23 | 19 | 376 | 375 | 13.9 | 13.9 | 36 | 36 | \$799,000 |
| Live Rock | 7 | 7 | 34 | 34 | -- | -- | -- | -- | \$577,000 |
| All Species | 684 | 531 | | | | | | | \$99,516,200 |

^{1/} For 2002, area expected to be used.

^{2/} Data not published to prevent disclosure of individual data.

^{3/} Hybrid Striped Bass, Koi, Largemouth Bass, Carp, Bream

^{4/} Crawfish, Eels, Snails, Turtles, Crabs, Frogs, Oysters

TROPICAL FISH SALES TOTAL \$42.4 MILLION

Net sales of tropical fish totaled \$42.4 million from 160 growers during 2001, virtually unchanged from total sales in 1999. Net sales of **egg layers** amounted to \$29.3 million; net sales of **livebearers** totaled \$13.2 million. Egg layers imported for immediate resale were valued at \$862 thousand in 2001 while the value of livebearer imports was \$37 thousand. Purchases from other growers totaled \$5.0 million in 2001. A total of 37.0 million square feet of water surface area was used to produce egg layers and 21.7 million square feet were used for livebearers. Current growers expect to use slightly less water surface area in 2002 than they used in 2001.

The survey found 22 producers who reported no sales in 2001, but who reported sales in 1999. These represent operations which have gone out of business or are idle. There were 9 new operations which expect to have sales in 2002.

Tropical fish production is centered in the West Central counties of Hillsborough and Polk, with a smaller concentration in the Southern East coast counties of Palm Beach, Broward, and Dade. Some of the more prominent species of tropical fish sold commercially for ornamental use are guppies, mollies, swordtails, variatus, platies tetras, gouramies, goldfish, cichlids, barbs, and tropical catfish.

AQUATIC PLANT SALES JUMP TO \$21.3 MILLION

Net sales from 38 growers of aquatic plants reached \$21.3 million during 2001, a 55 percent increase from sales of \$13.7 million reported by 43 growers in 1999. Aquatic plants include plants for **water gardens** and **aquariums** and farm-produced plants used in **wetland restoration**. Sales also include watercress production for food. Sales do not include harvest from the wild or resales of plants purchased from other growers.

There were 3 operations which have started since the previous survey and expect to have sales in 2002. Aquatic plants are grown primarily in the Central and Southern areas of the State.

CLAM SALES ARE \$18.3 MILLION

Sales of clams produced by Florida growers totaled \$15.0 million in 2001, down slightly from \$15.9 million in 1999. The 336 active growers (compared to 351 in the previous survey) sold 142 million clams in 2001 and averaged 11 cents per mature clam sold.

Planting in 2002 is uncertain for many producers, who indicated plans to weigh market and weather conditions before planting. **Preliminary intentions** are to plant 392 million clams in 2002, compared to 350 million planted in 2001 and 290 million in 2000. Survival rate to harvest was reported to average 54 percent in 2001, virtually the same as was reported in 1999.

Clam hatcheries provide "**seed**" clams for growers. In 2001, 30 producers sold 478 million clam seed, with total sales of \$3.3 million.

The survey found 66 operations which had no sales in 2001, due to weather or other factors. Another 28 new operations had planted seed and expect to have sales in 2002.

Clam production is concentrated in the Indian River estuary and the coastal waters of the Gulf of Mexico, in three main areas: the "Big Bend" counties of Dixie, Levy, and Taylor; the Southern West coast counties of Charlotte and Lee; and the Central East coast counties of Volusia, Brevard, and Indian River.

CLAM PLANTINGS - Florida, 2000-2002

| Planting | Number of Clams | Survival to Harvest |
|-----------------------------|-----------------|---------------------|
| Clams planted in 2000 | 289,791,000 | 53% |
| Clams planted in 2001 | 350,398,000 | 54% |
| Clams to be planted in 2002 | 392,010,000 | -- |

SHRIMP SALES EXCEED \$7 MILLION

In 2001, there were 13 producers of shrimp, 8 of which reported sales totaling \$7.4 million. The majority of sales were post larvae shrimp, sold as seed to other producers; the remainder were sold for the food market. Some producers reported water area in acres (36 acres in 2001 with a potential for over 150 acres in 2002) and some reported gallons (over 1.9 million in 2001 and about the same expected in 2002).

ALLIGATOR SALES ARE \$3.25 MILLION

Alligator producers sold hides and meat amounting to \$3.25 million in 2001, compared to \$3.35 million in 1999. Thirteen growers sold 20,600 **hides** at an average price of \$101 per hide, for a total value of \$2.07 million. The value per hide was higher than in 1999 but still below the price of \$122 in 1997. Producers also sold 271,400 pounds of **meat** at an average of \$4.35 per pound, for a total of \$1.18 million. The 21 active growers reported a total inventory of live gators at 87,700 as of February 1, 2002. This compares with 112,300 on hand February 1, 2000.

The survey found seven operations which had gone out of business since the previous survey. There were five operations which had inventory and could have sales in 2002.

Alligators are produced primarily in Central Florida, from Seminole and Orange counties down to the counties North and West of Lake Okeechobee.

ALLIGATOR INVENTORY By Type - Florida

| | 2/1/00 | 2/1/02 |
|---------------------------------|---------|--------|
| Number of producers | 32 | 19 |
| Total alligators on hand | 112,300 | 87,700 |
| Brood Stock | 6,800 | 5,300 |
| Hatchlings | 35,800 | 26,400 |
| All Other | 69,700 | 45,500 |

CATFISH SALES INCREASE TO \$1.3 MILLION

During 2001 catfish sales totaled \$1.3 million from 36 growers using 920 surface acres of ponds. These growers expect to use slightly more acres in 2002. In 1999, sales reported by 58 growers amounted to \$1.2 million.

Catfish sold for **food** in 2001 totaled 1,707,800 pounds, up from 1,352,500 pounds sold for food in 1999. Value of sales for food in 2001 was \$1.06 million. The average price was \$0.62 per pound, down considerably from the \$0.94 per pound in 1999. Growers sold **fingerlings** and other size catfish for \$244 thousand in 2001.

The survey found 12 operations which were idle and had no sales in 2001 (but could have sales in 2002) and 9 new operations which expect to have sales in 2002. Most catfish operations are in the Panhandle of Florida, primarily in Escambia County.

TILAPIA SALES RISE TO \$979 THOUSAND

During 2001, tilapia producers reported sales of \$979 thousand compared to \$889 thousand in 1999. The survey revealed 35 producers, 24 of whom had sales in 2001. Producers reported using 103 surface acres, over 3.4 million gallons, and over 140,000 square feet of water area.

Four producers had just started operating and expect to have sales in 2002. Another seven were operating but had no sales. Tilapia are produced in ponds and tanks, mainly in Central and Southern counties of Florida.

SALES OF OTHER AQUATICS TOTAL \$799 THOUSAND

Sales of other aquatics totaled \$799 thousand in 2001. Other aquatics include **crawfish**, **eels**, **snails**, **turtles**, **crabs**, **frogs**, and **oysters**. Production came from 19 growers, using 376 acres, 14,000 square feet, and 36,000 gallons. Data for individual species are not published to avoid disclosing individual data.

OTHER FISH SALES REACH \$3.2 MILLION

Sales from other food, sport, and game fish reached \$3.2 million in 2001. There were 28 growers, 18 of whom reported sales in 2001, using 212 acres, over 900 thousand gallons, and 136 thousand square feet. Sales were reported by six producers of **Hybrid Striped Bass** and by seven producers of **Koi**. Ten producers reported sales of **Triploid Grass Carp**, **Bream**, and/or **Largemouth Bass**, sold for direct consumption, as fingerlings or stockers for private ponds, and for aquatic weed control. Data for individual species are not published to avoid disclosing individual data.

LIVE ROCK PRODUCTION INCREASES

Live rock sales exceeded 300,000 pounds and \$500 thousand from seven producers using 34 acres of water. Live rock producers lease acreage in coastal waters off the west coast of Florida and in the Keys.

AQUACULTURE PRODUCERS BY COUNTY - 2001

